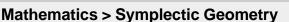
arXiv.org > math > arXiv:1107.1282

Search or Article-id

(Help | Advanced search)

All papers





A symplectic proof of a theorem of **Franks**

Brian Collier, Ely Kerman, Benjamin M. Reiniger, Bolor Turmunkh, Andrew Zimmer

(Submitted on 7 Jul 2011 (v1), last revised 14 May 2012 (this version, v2))

A celebrated theorem in two-dimensional dynamics due to John Franks asserts that every area preserving homeomorphism of the sphere has either two or infinitely many periodic points. In this work we reprove Franks' theorem under the additional assumption that the map is smooth. Our proof uses only tools from symplectic topology and thus differs significantly from all previous proofs. A crucial role is played by the results of Ginzburg and Kerman concerning resonance relations for Hamiltonian diffeomorpisms.

Comments: 15 pages. Minor changes. Final version to appear in

Compositio Mathematica

Symplectic Geometry (math.SG); Dynamical Systems Subjects:

(math.DS)

Cite as: arXiv:1107.1282 [math.SG]

(or arXiv:1107.1282v2 [math.SG] for this version)

Submission history

From: Ely Kerman [view email]

[v1] Thu, 7 Jul 2011 02:22:09 GMT (26kb) [v2] Mon, 14 May 2012 18:00:30 GMT (26kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- **PostScript**
- Other formats

Current browse context: math.SG

< prev | next > new | recent | 1107

Change to browse by:

math math.DS

References & Citations

NASA ADS

Bookmark(what is this?)









